

## METHOD AND APPARATUS FOR DYNAMICALLY ALLOCATING RESOURCES IN A COMMUNICATION SYSTEM

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### Abstract of the Disclosure

A method and apparatus is provided that dynamically  
allocates processor resources to data transfer-related operations,  
10 minimizing the processor resources used for data transfer-related  
operations and maximizing the processor resources available for  
other applications. The apparatus comprises a communication  
device (104), comprising a processing unit (204) and a complexity  
controller (206), which communication device (104) is capable of  
15 executing multiple data transfer-related operations and is highly  
configurable. The complexity controller (206) monitors a  
condition of a communication channel (102) and determines the  
best configuration of communication device (104) in regard to  
processor resource utilization to meet a given Quality of Service  
20 requirement for the condition of channel (102) and to maximize  
the processor resources available for other applications, such as  
data terminal equipment user applications (108) or signal  
processing by other communication devices using the same host  
processor.

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